

## REMARKS

Claims 2, 5-11, and 26 are pending in the application. Applicants request reconsideration in view of the Remarks submitted herewith.

Claims 2, 5-11, and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wolbarst in view of Coe (US 5,305,365). For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

The Examiner asserts that Wolbarst describes the characteristics of an x-ray mammography and specifically teach that they employ a molybdenum target with a focal spot of 0.1 mm and a minimum source to image distance of 40 cm. The Examiner also asserts that Coe teaches that a mammography may be operated with a source to image distance of 76 cm, and with a magnification of 1.5 as recommended by Wolbarst, the source to object distance would be 50 cm. Applicants respectfully traverse.

Claims 2, 5-11, and 26 include the following limitation: “setting a distance R1 between the X-ray tube and an object of a breast so as to be within a range defined by the following formula:  $(D-7)/200 \text{ m} \leq R1 \leq 5 \text{ m}$ .” Accordingly, setting a distance R1 as defined by a formula, much less the formula as set forth in the claimed limitation. There is nothing in Wolbarst that teaches or suggests how to determine the distance of R1. Wolbarst merely teaches a minimum source to image receptor distance of 40 cm. Moreover Coe also merely teaches source to image distance of 76 cm and teaches nothing about the size of a focal spot of the x-ray tube and about how to determine the distance R1. Thus, even if Wolbarst and Coe are combined, it is not obvious to determine the distance R1 between an x-ray tube and an object of a breast in accordance with a size D of a focal spot of the x-ray tube with the formula of  $(D-7)/200 \text{ m} \leq R1 \leq 5 \text{ m}$ .

In addition, the Examiner asserts that by combining Wolbarst and Coe, the source to

object distance would be 50 cm. However, there is nothing in Wolbarst or Coe that teach about the source to object distance.

Furthermore, there is no motivation to combine Wolbarst and Coe. Wolbarst teaches on page 221 to use two focal spots of 0.4 mm for normal mammography and 0.1 mm for magnification mammography by a factor of 1.5 or 2. However, there is nothing in Coe that teaches or suggest about a focal spot and magnification mammography. That is, as shown in Figure 1 of Coe, Coe merely teaches normal mammography and teaches nothing about a structure to conduct magnification mammography. As such, there is no motivation to combine the 0.1 mm of Wolbarst with Coe. Accordingly, it would not have been obvious for an ordinarily skilled person in the art to combine Wolbarst and Coe so as to conduct magnification mammography in the apparatus of Coe.

Thus, the combination of Wolbarst and Coe do not teach or suggest all of the limitations of claims 2, 5-11, and 26. Moreover, there is no motivation to combine Wolbarst and Coe. Applicant respectfully requests that the rejection be withdrawn.

Moreover, the requirement for a determination of obviousness is that “both the suggestion and the expectation of success must be founded in the prior art, not in applicant's disclosure.” *In re Dow Chem.*, 837 F.2d 469, 473, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) (emphasis supplied). An Examiner thus cannot base a determination of obviousness on what the skilled person in the art might try or find obvious to try. Rather, the proper test requires determining what the prior art would have led the skilled person to do, with a reasonable expectation of success.

In this case, none of the references teaches that there can be success with magnification mammography. In Coe, there is no teaching of magnification mammography. In Wolbarst, the reference teaches magnification mammography by a factor of 1.5 or 2 for a more detailed examination of microcalcifications. See page 221, right column lines 20-25. However, Wolbarst also explicitly teaches that the unsharpness of the image due to penumbra increases as the magnification of magnification mammography increases. See Figure 22-11 on page 197.

To further show the differences between Applicants' present invention and the references, Applicants submit herewith a Declaration, which sets forth Comparative example I, which represents Coe, Comparative example II, which represents the combination of Wolbarst and Coe (which assumes that these two references can be combined, however, Applicants

continue to maintain that they cannot be combined), and Inventive example, which represents the an embodiment of the present invention.

As stated in the Test results, by magnification radiography, a more detailed examination of the x-ray can be conducted in Comparative example II than Comparative example I; however, as Wolbarst explicitly teaches, the unsharpness of image due to penumbra increases in Comparative example II.

In contrast, with the radiographing method of an embodiment of the present invention, edge portions of contours of the objects in the Inventive example becomes clearer because there is a higher sharpness than Comparative example II. See the Declaration.

Accordingly, for this additional reason, claims 2, 5-11, and 26 are patentable over Wolbarst and Coe. Applicants respectfully request that the rejection be withdrawn.

In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

CANTOR COLBURN LLP

By: 

Lisa A. Bongiovi  
Registration No. 48,933  
CANTOR COLBURN LLP  
55 Griffin Road South  
Bloomfield, CT 06002  
Telephone (860) 286-2929  
Facsimile (860) 286-0115  
Customer No. 23413

November 7, 2003